PIH11

ECONOMIC EVALUATION ALONGSIDE THE CAFFEINE FOR APNEA OF PREMATURITY (CAP) TRIAL: SHORT TERM OUTCOMES

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OBJECTIVES: To determine the cost-effectiveness of treatment with caffeine compared to placebo for apnea of prematurity, in infants with birth-weight less than 1250 grams, using data from the multicenter international Caffeine for Apnea of Prematurity (CAP) trial (New Engl J Med, 2006 354: 20). **METHODS:** We undertook a retrospective economic evaluation of the cost per survivor without Bronchopulmonary Dysplasia (BPD), using individual patient data from clinical trial. We included direct medical costs either to the insurance payer or the hospital but excluded costs to parents and society, such as lost productivity. We multiplied local resource utilization data from the clinical trial, including days of ventilation, type of surgery or drug dosage, by unit costs for each resource. Unit costs were derived from two separate databases of Canadian costs for similar patient populations. We used a price of $0.10 per mg of generic caffeine citrate for our base case analysis. All costs were expressed in 2008 Canadian dollars. The time horizon for this analysis extended to first discharge home. **RESULTS:** The mean cost per infant was $117,577 in the caffeine group and $126,078 in the placebo group (difference of $8,501, p = 0.0025). Cost-effectiveness analysis showed caffeine to be a dominant therapy: in 100% of 1000 bootstrap replications of the analysis, caffeine-treated infants had simultaneously better outcomes and lower mean costs. These results were robust to a ten-fold increase in the cost of caffeine. **CONCLUSIONS:** In comparison to placebo, caffeine therapy for apnea of prematurity in infants less than 1250 grams is economically appealing. Extension of the time horizon for this cost-effectiveness analysis to 18 to 21 months corrected age is currently in progress.

PIH12

COMPARISON OF YAZ TO SSRIS IN THE TREATMENT OF PREMENSTRUAL DYSPHRORIC DISORDER: COST-EFFECTIVENESS ANALYSIS

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OBJECTIVES: Premenstrual dysphoric disorder (PMDD), a more severe form of Premenstrual Syndrome (PMS), is reported to affect between 3–8% of reproductive aged women. While PMDD has received increased attention in recent years, the cost-effectiveness of treatments for PMDD remains unknown. This study objective was to assess the cost-effectiveness of treatment strategies for PMDD from a payer's perspective. **METHODS:** A decision-analytic model was developed to evaluate the cost-effectiveness of four medications with FDA-approved indication for treatment of PMDD; YAZ® (DRSP 3 mg/EE), Sarafem® (fluoxetine), Zoloft® (sertaline), and Paxil CR® (paroxetine). Direct costs included medication and physician visits for a 6-month treatment period. Clinical outcomes were assessed using treatment success, failure, and discontinuation rates. Medication costs were generated based on AWP of branded products. Physician visit costs were obtained from a claims database study of PMDD patients and the Agency for Healthcare Research and Quality. Clinical outcomes probabilities were derived from published clinical trials on PMDD. The incremental cost-effectiveness ratio (ICER) was calculated using the difference in costs and percentage of successfully treated patients, allowing switching due to treatment failure at 3-months. Deterministic and probabilistic sensitivity analyses were used to assess the impact of uncertainty in parameter estimates. **RESULTS:** YAZ was shown to be the most cost-effective strategy, dominating both Zoloft and Paxil. The estimated ICER of Sarafem relative to YAZ was $4385. The cost-effectiveness of YAZ relative to Sarafem was maintained even if the cost or success rate of YAZ were varied within 50% of the base case value, whereas a change in cost-effective strategy (from YAZ to Sarafem) was identified at a threshold value of $3450. This threshold is more than double the value associated with the most costly treatment. **CONCLUSIONS:** Yaz was more cost-effective than Sarafem and was both less costly and more effective compared to Paxil and Zoloft.

PIH13

COST-EFFECTIVENESS OF A SCHOOL-BASED TOBACCO-USE PREVENTION PROGRAM IN SPAIN

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OBJECTIVES: In Spain, tobacco consumption levels among children are high, more than 46% (latest data available). In this scenario, a school-based tobacco prevention programme (ITES) was developed, following PRECEDE model by Green LW et al., which intends to influence on factors that determine our behaviour, such as values and attitudes to smoking. The objetive is to assess cost-effectiveness ratio of ITES in Spanish high schools. **METHODS:** A decision tree model was developed. One branch represented the scenario where ITES was implemented in high schools, while the other branch represented the scenario without ITES. Analysis was performed from the perspective of the health care system and the time horizon was student's lifetime. Model's parameters were obtained from a pilot study in high schools in Canary Islands and from scientific literature. Direct and indirect lifetime costs were included. The selected effectiveness measure was life years gained (LYG) and discount rate was 3%. Stochastic and multivariate sensitivity analysis was performed, and acceptability curves were calculated. **RESULTS:** The ICER is €44,911 /LYG, and IC [€44,972/LYG; €44,848/LYG]. The average incremental cost is €22,061,641 and IC [€22,406,222; €21,717,059]. The average incremental effectiveness is 491.23 /LYG and IC [484.23 LYG; 498.22 LYG]. The probability of right decision for a willingness to pay of €9000/LYG is 95%. **CONCLUSIONS:** The introduction of ITES in Spanish high schools offers a favourable cost-effectiveness ratio. The introduction of ITES in Spanish high school is a good way to save money and gain LY.

PIH14

COST-EFFECTIVENESS OF NEONATAL SCREENING FOR CONGENITAL ERRORS OF METABOLISM USING TANDEM MASS SPECTROMETRY

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OBJECTIVES: To assess cost-effectiveness ratio of MS/MS screening for PKU and MCADD in Spanish communities. **METHODS:** A decision tree model was developed. One branch represented the scenario where MS/MS was implemented for PKU and MCADD screening, while another branch represented the scenario without MS/MS technology (no screening for MCADD). Analysis was performed from the Health System perspective and the time horizon was newborn's lifetime. Main model parameters were obtained from a Spanish newborn screening program, scientific literature, and expert's recommendations. The selected effectiveness measure was years of life gained (LYG) and discount rate was 3%. Stochastic and multivariate sensitivity analysis was performed, and acceptability curves were calculated. **RESULTS:** Case of decentralized screening programs along Communities, and about 90–100 thousand births per year (/Y); the incremental cost-effectiveness ratio (ICER) is €5936/LYG and CI [€5866/LYG; €5986/LYG]. However, when births number is around 5,000/Y, ICER is €30,554 /LYG and CI [€30,236/LYG; €30,877/LYG]. For a willingness to pay around €30,000/LYG, probabilities of right decision of each scenario are 100% and 43.28% respectively. **CONCLUSIONS:** The introduction of MS/MS neonatal screening for PKU and MCADD offers favourable cost-effectiveness ratio. Cost-effectiveness ratio becomes better with growing number of annual screenings with MS/MS, remaining more or less constant on 30–40 thousand infants/Y.The findings of this report support MS/MS introduction for PKU and MCADD screening in Spanish Communities, when alive newborns number is superior to 5000/Y.

PIH15

COST EFFECTIVENESS ANALYSIS OF GOSERELIN EMPIRIC THERAPY FOR DEEP ENDOMETRIOSIS TREATMENT

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OBJECTIVES: To perform a comparative cost-effectiveness analysis from the Brazilian Public Health System's perspective of the standard treatment with goserelin acetate of only patients with deep endometriosis confirmed by videolaparoscopy versus empirical treatment with goserelin acetate of all patients with chronic pelvic pain and suspected deep endometriosis. **METHODS:** To determine the local experience of standard treatment and empiric treatment, it was conducted a specialist consult with a gynecologist from a public institution, with large experience in endometriosis treatment. It was developed an analytic decision model to estimate the cost effectiveness ratio of empiric treatment versus pattern treatment with goserelin depot 3.6 mg every four weeks, during six months. Efficacy rates were obtained from published literature. The model includes only direct costs, obtained from Ambulatory and Hospital Information System and Price Database of Brazilian Ministry of Health. The outcome used was time until symptoms improvement. **RESULTS:** The cost-effectiveness analysis revealed that the empiric therapy with goserelin lead to a reduction of time until improvement of symptoms of 3 months, and lower cost with a reduction of US$1662 (1US$ = R$1.6428), when compared to the pattern treatment with previous videolaparoscopy. **CONCLUSIONS:** Empiric therapy of endometriosis using goserelin acetate seems to be a cost-saving alternative in the Brazilian Public Health System scenario.

PIH16

COST-EFFECTIVENESS ASSESSMENT OF LEVONORGESTREL INTRAUTERINE SYSTEM IN PATIENTS WITH IDIOPATHIC MENORRHAGIA IN A HONG KONG PUBLIC HOSPITAL

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OBJECTIVES: To examine the cost-effectiveness of thermal balloon endometrial ablation (TBEA) and levonorgestrel intrauterine system (LNG-IUS) one year after treatment in a group of patients with idiopathic menorrhagia in a public hospital in Hong Kong. **METHODS:** The subjects were patients who were previously recruited in a randomized clinical trial to compare their health status after treatment with TBEA or LNG-IUS. The study design was a retrospective review of case history of the group of patients who participated in the earlier study. Study endpoint was at one year after treatment with a satisfactory control of bleeding. Cost items collected included medications, laboratory procedures, duration of hospital stays, transfusions, use of emergency room/intensive care unit facilities, outpatient clinic follow-ups, visits to private doctors